

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

REITSTÖTTER, KINZEBACH &
PARTNER (GBR)
Sternwartstrasse 4
D-81679 München
GERMANY

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION
Reitstötter, Kinzebach & Part.

Eing. 09. Sep. 2005

Sternwartstr. 4 (PCT Rule 44.7) München

Date of mailing
(day/month/year)

08/09/2005

Applicant's or agent's file reference

M/45271-PCT

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/EP2004/010930

International filing date
(day/month/year)

30/09/2004

Applicant

NUVERA FUEL CELLS EUROPE S.R.L.

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise, the applicant must, within **20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Véronique Baillou

Post Attached Copy

4.12.11

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference M/45271-PCT	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2004/010930	International filing date (day/month/year) 30/09/2004	(Earliest) Priority Date (day/month/year) 01/10/2003
Applicant NUVERA FUEL CELLS EUROPE S.R.L.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).



- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 3



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/010930

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H01M8/02 H01M8/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/23645 A (H POWER ENTERPRISES OF CANADA INC; CONDEESCU, ADRIAN; ROBERGE, RAYMOND) 21 March 2002 (2002-03-21)	1-4, 12-14
Y	page 4, line 34 - page 7, line 36; figures 7-9	10,11
Y	US 5 578 388 A (FAITA ET AL) 26 November 1996 (1996-11-26) cited in the application column 10, lines 1-5; figure 5 column 4, line 66 - column 5, line 10	10,11

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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

31 August 2005

Date of mailing of the international search report

08/09/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Fitzpatrick, J

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 00/70698 A (DE NORA FUEL CELLS S.P.A; MAZZUCCHELLI, GABRIELE; BRAMBILLA, MASSIMO;) 23 November 2000 (2000-11-23) figures 1,5 page 13, lines 16-19 page 14, lines 5-15 examples 1-3 -----	10,11
A	US 4 279 731 A (PELLEGRI ET AL) 21 July 1981 (1981-07-21) column 6, line 59 - column 7, line 19 -----	1-4,9,10
A	US 3 589 942 A (FRANK B. LEITZ JR ET AL) 29 June 1971 (1971-06-29) column 3, lines 12-43; figure 2 -----	1-4, 12-14

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/010930

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0223645	A	21-03-2002	AU 9353601 A WO 0223645 A2	26-03-2002 21-03-2002
US 5578388	A	26-11-1996	IT 1270878 B AT 210339 T AU 674931 B2 AU 6054194 A BR 9401641 A CA 2121455 A1 CN 1108005 A ,C CZ 9400986 A3 DE 69429304 D1 DE 69429304 T2 DK 629015 T3 EP 0629015 A1 ES 2169050 T3 FI 941932 A JP 2953555 B2 JP 6349508 A RU 2126569 C1 SK 50694 A3 US 5482792 A US 5565072 A	13-05-1997 15-12-2001 16-01-1997 03-11-1994 22-11-1994 31-10-1994 06-09-1995 19-10-1994 17-01-2002 24-10-2002 02-04-2002 14-12-1994 01-07-2002 31-10-1994 27-09-1999 22-12-1994 20-02-1999 09-11-1994 09-01-1996 15-10-1996
WO 0070698	A	23-11-2000	IT MI991090 A1 AU 5213700 A BR 0010626 A CA 2368949 A1 CN 1351769 A ,C WO 0070698 A1 EP 1181730 A1 JP 2003500802 T TW 456065 B US 6737183 B1	20-11-2000 05-12-2000 19-02-2002 23-11-2000 29-05-2002 23-11-2000 27-02-2002 07-01-2003 21-09-2001 18-05-2004
US 4279731	A	21-07-1981	IT 1163737 B AR 227296 A1 AT 44554 T AU 532517 B2 AU 6479780 A BR 8007570 A CA 1169808 A1 CS 223889 B2 DD 154831 A5 DE 3072159 D1 EP 0031897 A2 EP 0111149 A1 ES 8201638 A1 ES 8300144 A1 FI 803655 A ,B, HU 183256 B JP 1301957 C JP 57203783 A JP 60024186 B JP 1372372 C JP 61037355 B JP 61096093 A JP 1592189 C	08-04-1987 15-10-1982 15-07-1989 06-10-1983 02-07-1981 02-06-1981 26-06-1984 25-11-1983 21-04-1982 17-08-1989 15-07-1981 20-06-1984 16-03-1982 01-01-1983 30-05-1981 28-04-1984 14-02-1986 14-12-1982 11-06-1985 07-04-1987 23-08-1986 14-05-1986 14-12-1990

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/010930

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4279731	A	JP 56102586 A	17-08-1981
		JP 63015354 B	04-04-1988
		MX 148530 A	29-04-1983
		NO 803330 A ,B,	01-06-1981
		PL 228167 A1	18-09-1981
		RO 81392 A1	29-04-1983
		SU 1126210 A3	23-11-1984
		US 4417960 A	29-11-1983
		US 4389298 A	21-06-1983
		US 4425214 A	10-01-1984
		US 4518113 A	21-05-1985
		YU 302380 A1	28-02-1983
		ZA 8006648 A	25-11-1981
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US 3589942	A	29-06-1971	NONE
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

Patentanwälte
Reitstötter, Kinzebach & Part.

Eing

09. Sep. 2005

PCT

Sternwartstr. 4

D-81679 München

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2004/010930

International filing date (day/month/year)
30.09.2004

Priority date (day/month/year)
01.10.2003

International Patent Classification (IPC) or both national classification and IPC
H01M8/02, H01M8/04

Applicant
NUVERA FUEL CELLS EUROPE S.R.L.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Fitzpatrick, J

Telephone No. +49 89 2399-8570



WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

10/572534
IAP9 Rec'd PCT/PTO 17 MAR 2006
International application No.
PCT/EP2004/010930

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. II Priority

1. ☐ The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43*bis*.1 and 64.1) is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:
see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/010930

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	5-11
	No: Claims	1-4,12-14
Inventive step (IS)	Yes: Claims	
	No: Claims	5-11
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Section II.3: Priority - Additional Observations

From the original Italian priority document MI20031881 and on the basis of the current set of claims, the priority appears to be validly claimed.

Section V.2: Citations and Observations

(i) Document WO02/23645 (D1) discloses a liquid cooled bipolar separator plate assembly for use in the construction of a fuel cell and whereby the structure is positioned between MEA assemblies. The bipolar separator plate comprises a pair of rectangular distributor plates (11, 11') having perforations 20 and disposed in spaced parallel relationship by an intermediate structure. This structure may be comprised of two corrugated plates 12 of undulated cross-section with each plate defining longitudinal peaks and valleys. The separator plates are also rectangular plates and are interconnected in back-to-back relationship at the peaks to form a group of inner adjacent cooling liquid channels 15 therebetween and a first and second group of outer gas channels 16 and 17 on opposed outer sides of the interconnected separator plates. The peaks on the outer sides are secured to a respective one of the perforated distributor plates by welding. The inner cooling liquid channels and the outer gas channels are opened at opposed end edges of the interconnected separator and distributor plates. From the detail given in the figures, the perforations 20 are clearly constant in size and ordered. They are thus fairly considered as calibrated. Bearing also in mind that the use(s) to which the product components of the structure are put are only limiting to the extent that said components should be suitable for said use(s), the complete disclosure of document D1 is prejudicial to the novelty of at least the subject matters of current claims 1-4 and 12-14.

(ii) The Applicant has himself conceded in the description on page 3 and page 7 in combination with Fig.1 that the use of reticulated current collectors between the bipolar separator and MEA to both improve electrical continuity and reactant gas distribution is known in the art. This is apparent, for example, from the specific disclosures of document US5578388 (D2) or the later document WO00/70698 (D3) referred to in the International Search Report (ISR). As such, the subject matters of current claims 10 and 11 could not provide the required inventive step in a new main claim.

(iii) Although the features of current claims 5,6 and 9 are not disclosed in the documents of

the (ISR), it is not currently apparent what contribution they could make to a new main claim which would be sufficient to also satisfy the inventive step requirements of Art.33(3) PCT.

Section VIII: Certain Observations

The application infringes the requirements of Art.6 PCT in the following respects:

(i) The two embodiments of the invention described on pages 5 and the additional embodiment on page 7 referring to "or otherwise secured" do not fall within the scope of the claims, which requires the cathode and anode sheets to be "welded or metallurgically bonded" through the corrugated conductive element.. This inconsistency between the claims and the description leads to doubt concerning the matter for which protection is sought, thereby rendering the claims unclear, Article 6 PCT.

(ii) The description moreover does not indicate any other methods of securing said sheets in a manner suitable for a fuel cell stack. In this regard, the simple act of applying pressure to secure said sheets would be still covered by these disclosures in the description. Such can clearly however not be intended as the invention addresses inter alia the problem of facilitating easier assembly by providing the integral bipolar separator as claimed. The features of being "welded or metallurgically bonded" are thus features essential to the invention within the contexts of Art.6 PCT and Art.33(3) PCT (inventive step). The above discrepancies must thus be resolved via excision of the offending terms from the description.

(iii) Claim 14 does not meet the requirements of Article 6 PCT in that in merely referring to the drawings, the matter for which protection is sought is not clearly defined.

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